

United States Patent [19]

Fukazawa et al.

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[54] CENTRIFUGAL PUMP

[75] Inventors: Tetsuo Fukazawa, Tokyo; Shigeyoshi Yokoyama, Sakura, both of Japan

[73] Assignees: Nihon Radiator Co., Ltd.; Pacific Machinery & Engineering Co., Ltd., both of Tokyo, Japan

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Primary Examiner—Robert E. Garrett

Assistant Examiner—Joseph M. Pitko

Attorney, Agent, or Firm—Kane, Dalsimer, Sullivan, Kurucz, Levy, Eisele and Richard

[57] ABSTRACT

A centrifugal pump including a stationary guide vane secured to a casing, and a centrifugal impeller arranged for rotation in the casing in a position adjacent the stationary guide vane. The centrifugal impeller has at least one blade wound in convolutions on a peripheral surface of a hub and having a blade inlet surface substantially perpendicular to the axis of rotation of the impeller and a fluid flow entrance surface substantially parallel to the blade inlet surface. The blade is wound in a suitable number of convolutions extending from an inlet to an outlet on the hub and is forwardly inclined toward the axis of rotation of the impeller at an increasingly greater angle in going from the inlet toward the outlet, so as to produce centrifugal forces at the outlet. The centrifugal impeller has a high head which has been beyond the power of axial impellers to achieve.

3 Claims, 9 Drawing Figures

